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THE
NATURAL HISTORY
OF
BRITISH INSECTS.

Law and Gilbert, Printers, St. John's-Square, London.

THE
NATURAL HISTORY
OF
BRITISH INSECTS;
EXPLAINING THEM
IN THEIR SEVERAL STATES,
WITH THE PERIODS OF THEIR TRANSFORMATIONS,
THEIR FOOD, ECONOMY, &c.
TOGETHER WITH THE
HISTORY OF SUCH MINUTE INSECTS
AS REQUIRE INVESTIGATION BY THE MICROSCOPE.
THE WHOLE ILLUSTRATED BY
C O L O U R E D F I G U R E S,
DESIGNED AND EXECUTED FROM LIVING SPECIMENS.

BY E. DONOVAN, F. L.S.; W.S., &c.

VOL. XV.

LONDON:

PRINTED FOR THE AUTHOR,
And for F. C. and J. RIVINGTON, N^o 62. PAUL'S CHURCH-YARD.

MDCCCXI.

ЗАТОЕЗДИ НА ТЯЯ

МУЗЫКА ДЛЯ КЛАВИШ

САТАРДА БЫТЬ ВСЕГДА ПОДНЯТЫМ

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THE
NATURAL HISTORY
OR
BRITISH INSECTS.



PLATE DV.

PHALÆNA TYPICOIDES.

SCARCE GOTHIC MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base: tongue spiral: wings in general deflected when at rest. Fly by night.

VOL. XV.

B

SPECIFIC

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PLATE DV.

SPECIFIC CHARACTER

AND

SYNONYMS.

PHALÆNA TYPICOIDES. Wings incumbent, varied fuscous and reddish, with white streaks: posterior pair whitish with fuscous border.

This is an insect of large size, and elegant appearance, and is generally esteemed among collectors in Britain on account of its rarity. It nevertheless occurs sometimes in abundance in particular situations, as for example in some parts of Yorkshire, and also in Devonshire. In the latter County at Knowle near Kingsbridge Mr. Montagu takes it in considerable plenty in his own garden throughout the summer. The same species inhabits Germany.

The transformations of this curious Moth are altogether unknown.

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PLATE DVI.

CARABUS GLABRATUS.

SMOOTH CARABUS.

COLEOPTERA.

GENERIC CHARACTER.

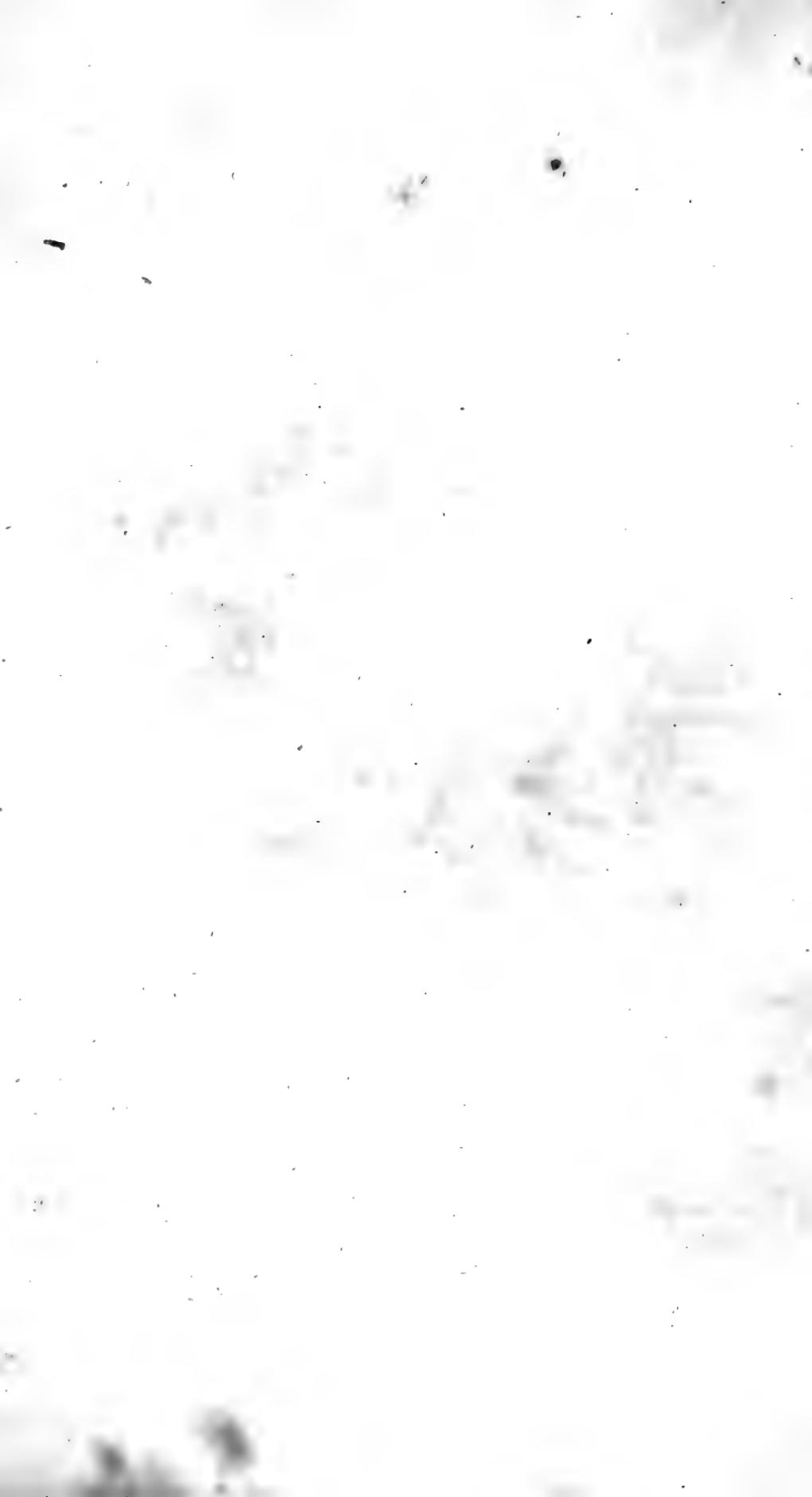
Antennæ filiform: feelers generally six, the last joint obtuse and truncated; thorax flat and margined: wing-causes margined.

SPECIFIC CHARACTER.

Apterous, black: wing-causes very smooth, and uniformly black.

CARABUS GLABRATUS. Apterous, ater elytris lavissimis unicoloribus.
Fabr. Ent. Syst. T. 2. 125. 4.—Carabus glabrus Panz.

A rare species described by Fabricius as a native of Germany. It was first discovered in this country by Mr. W. G. Hooker of Norwich, who found it in great plenty on a mountain in Yorkshire; and since that period it has been met with in the rocks near Killarney in Ireland.



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PLATE DVII.

MUSCA MORTUORUM.

DIPTERA.

GENERIC CHARACTER.

Mouth with a soft exserted fleshy proboscis and two equal lips : sucker furnished with bristles : feelers two, very short (or none) antennæ short,

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ feathered : thorax black : abdomen brassy green : legs black.

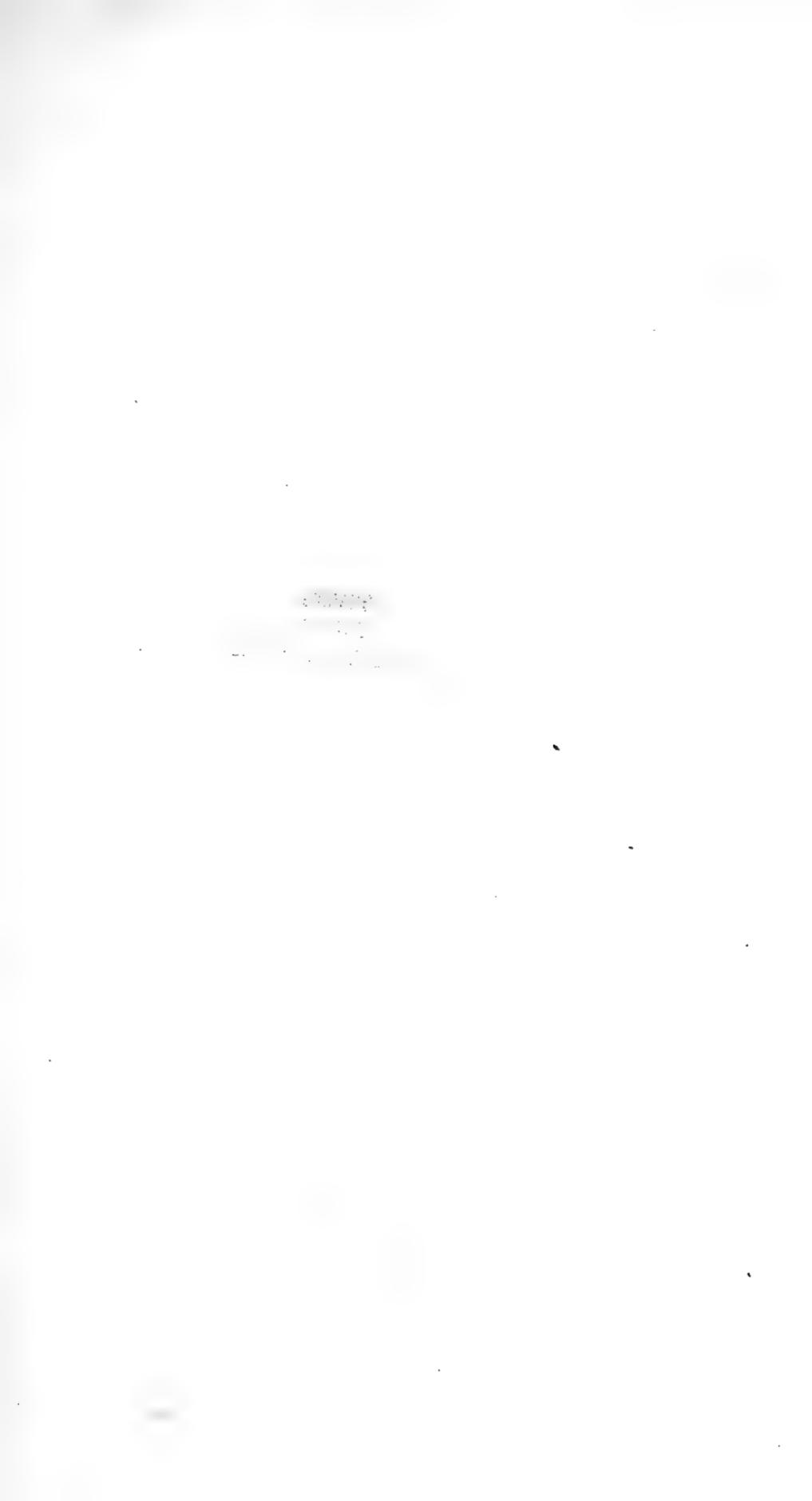
MUSCA MORTUORUM : antennis plumatis, thorace nigro, abdomine viridi æneo, pedibus nigris. *Linn. Syst. Nat. 2. 986, 66.—Fn. Sv. 1830.—Fabr. Ent. Syst. T. 4. 318. n. 23.*

A native of Sweden, and other parts of Europe ; it is to be esteemed also a British species, a specimen having been lately taken

by

by Mr. W. E. Leach, in Scotland: this was met with on the bog in which the battle of Bannockbourn was fought, a waste in the vicinity of Stirling, and is the sole authority within our recollection upon which we could venture to consider it a native of these kingdoms. It is a most interesting acquisition, and is represented in its natural size with all possible fidelity, in two different positions.

In addition to the character assigned to this species by Linnaeus, we ought to observe that the thorax is lineated with black, and greyish, a circumstance to which Fabricius refers in the expression "*thorax sublineatus*;" in the specimen above described, these lines are pretty distinct.



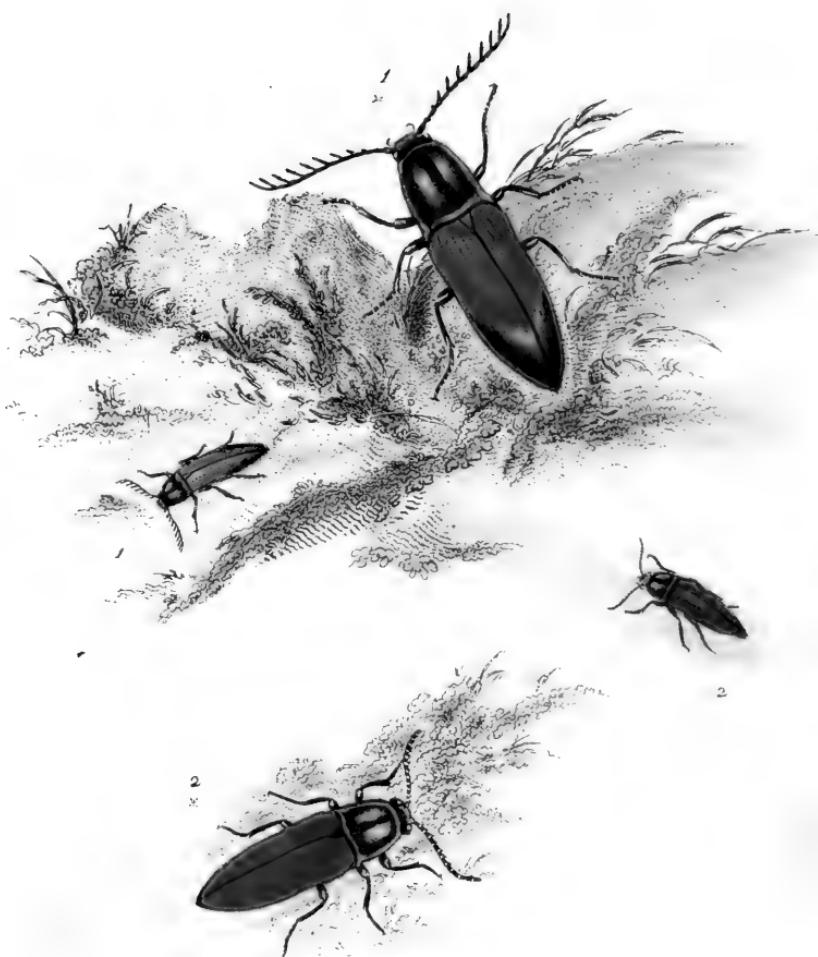


PLATE DVIII.

FIG. I. I.

ELATER SANGUINEUS.

SANGUINEOUS ELATER, OR SKIPPER BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform, lodged in a groove under the head and thorax : under-side of the thorax terminating in an elastic spine, placed in a cavity of the abdomen, by which means when placed on the back it springs up, and recovers its natural position.

SPECIFIC CHARACTER

AND

SYNONYMS.

Deep black : wing-cases fanguineous, and without spots.

ELATER SANGUINEUS: ater elytris striatis fanguineis immaculatis.

*Linn. Syst. Nat. 2. 654. 21.—Fn. Sv. 731.—**Gmel. 1906. 21.*Elater nigris elytris rubris,—Le taupin à étuis rouges. *Geoff. Inf. I.* 131. 2.

Elater

PLATE DVIII.

Elater melanocephalus ruber *Panz. Voet.* ii. 117. 21. t. 44. f. 21.
ELATER SANGUINEUS. *Marsh. Ent. Brit. T. I.* p. 383. n. 20.

Very rare in Britain. The species is found in Sweden, Germany and France.

FIG. II II.

ELATER CUPREUS.

COPPERY ELATER, or SKIPPER BEETLE.

SPECIFIC CHARACTER

AND

SYNONYMS.

Coppery: wing-cases half yellow: antennæ of the male pectinated.
ELATER CUPREUS: cupreus, elytris dimidiato-flavis: antennis maris pectinatis. *Marsh. Ent. Syst. T. I.* p. 384. 23.
ELATER CUPREUS. *Fabr. Syst. Ent.* 15.—*Spec. Inf. I.* 268. 20.—*Ent. Syst. I. b.* 225. 37.
ELATER CASTANEUS. *Scop.* 286.

A very beautiful and rare species: its size equal to that of *Elater pectinicornis*: dull coppery or brassy rufous: antennæ black.

PLATE

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P L A T E DIX.

CURCULIO SULCIROSTRIS.

SULCATED-SNOUT CURCULIO, or WEEVIL BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated, and seated on the snout which is horny and prominent: feelers four and filiform.

SPECIFIC CHARACTER.

Oblong, cinereous, clouded with black: snout with three furrows.

CURCULIO SULCIROSTRIS: oblongus cinereus subnebulosus rostro trifurcato. *Fabr. Inf.* 1. p. 187. n. 143.—*Mant. Inf.* 1. p. 114. n. 185.

CURCULIO SULCIROSTRIS. *Gmel. Linn. Syst. Nat.* 1787, 85.—*Paykull Monogr.* 100.—*Panz. Ent. Germ.* 321. 128.—*Marsh. Ent. Brit. T.* 1. p. 308. n. 204.



Found on plants in Europe; it is a species of large size, and is rare in Britain.



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PLATE DX.

FIG. I.

PHALÆNA OMICRONATA.

O-O CARPET MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ gradually tapering from the base: tongue spiral: wings in general deflected when at rest: Fly by night.

* *Geometra*.

SPECIFIC CHARACTER.

PHALÆNA OMICRONATA. First wings fulvous at the base and tip, with fuscous streaks and dots: in the middle a broad indented cinereous band with a double O nearer the anterior margin.



An elegant and not very frequent species found in the vicinity of woods in the month of June, July and August.

FIG. II.

PHALÆNA CONTRISTATA.

COMMON CARPET MOTH.

SPECIFIC CHARACTER.

PHALÆNA CONTRISTATA. White with a common fuscous border : anterior wings brownish at the base, the middle with a fuscous band ; disk of the posterior pair with dusky streaks.

PHALÆNA CONTRISTATA. *Marsh. M. S.*

Common in the months of May and June in most woody situations. It is very abundant, in particular near London.

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PLATE DXI.

MUSCA FESTIVA.

DIPTERA.

GENERIC CHARACTER.

Mouth with a soft exserted fleshy proboscis, and two equal lips : sucker furnished with bristles : feelers two, very short (or none) antennæ short.

SPECIFIC CHARACTER.

MUSCA FESTIVA. Green and golden, glossed with red, and cinereous : thorax lineated with yellow : abdomen banded with black.



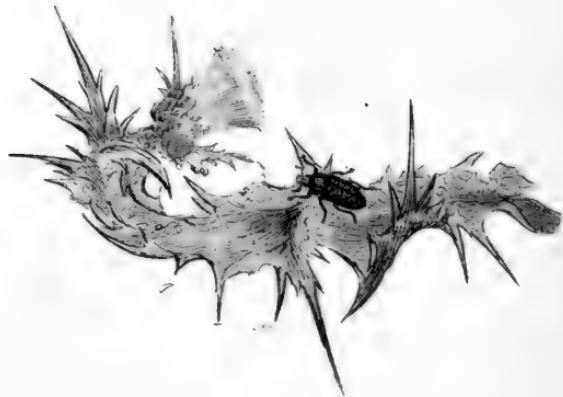
An insect of peculiar beauty, extremely rare, and which does not appear to be described by any author.

The natural size of this very curious species is denoted by the smaller figure in the upper part of the plate : when magnified, as is shewn beneath, its appearance is remarkable for its singularity. The head is rather small and green, with eyes of a deep fuscous colour : the thorax green glossed with blue, with a double golden yellow line in

the

the middle, and a single one on each side: the abdomen greenish, and partaking more of the rich metallic hues of gold, yellow, and tints of red, than the other parts. The whole of the body is of a somewhat slender form; the wings large, and the legs long and slender in proportion.

$$\begin{matrix} \text{max} & \text{min} \\ \text{avg} & \text{std} \\ Q^{\pi_{\theta}} & Q^{\pi_{\theta'}} \end{matrix}$$



P L A T E D X I I .

CURCULIO CARDUI.

THISTLE CURCULIO, OR WEEVIL BEETLE.

COLEOPTERA.

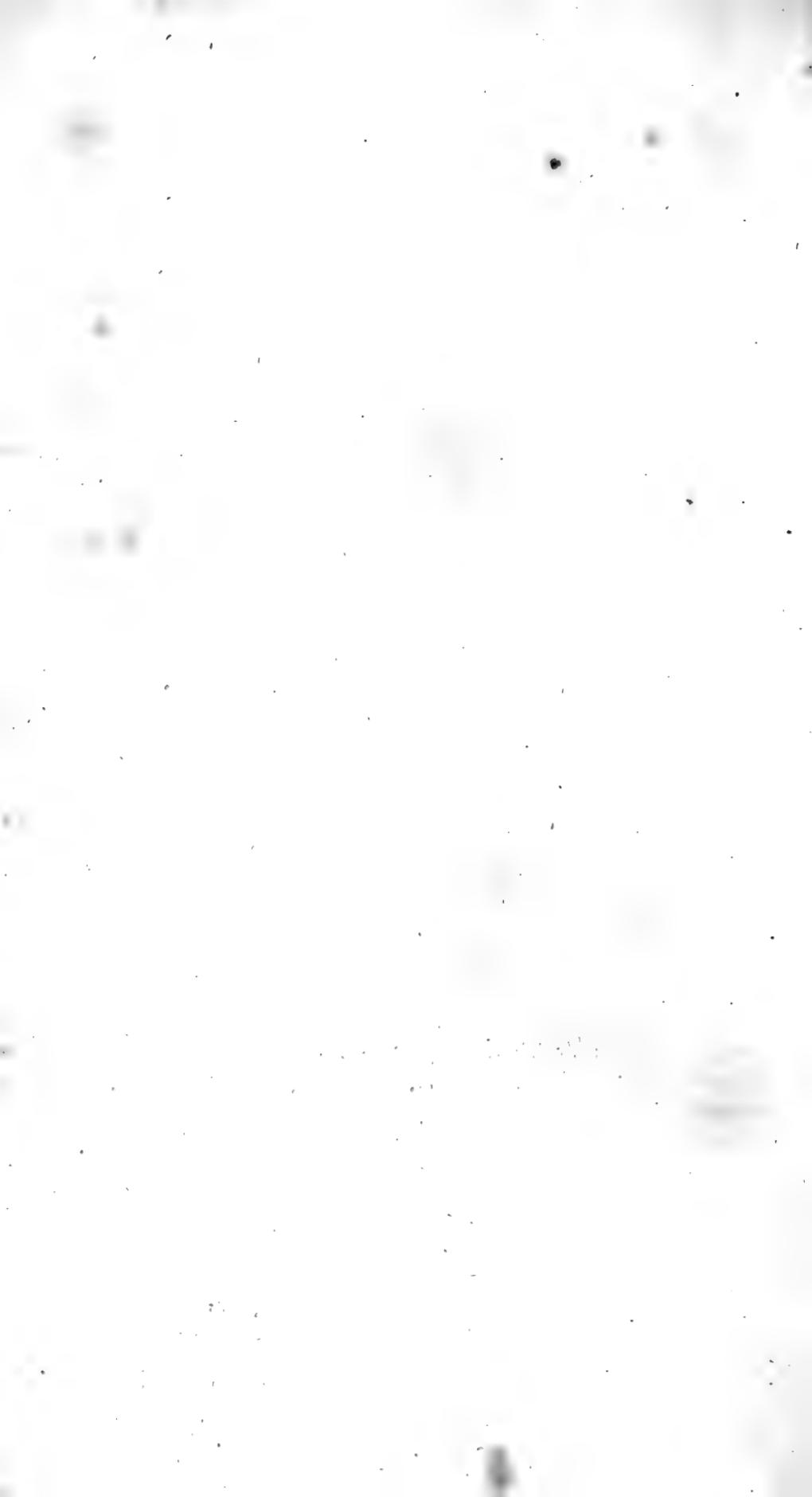
GENERIC CHARACTER.

Antennæ clavated, and seated on the snout which is horny and prominent: feelers four and filiform.

SPECIFIC CHARACTER.

CURCULIO CARDUI. Oblong: green, black with numerous dots and broken linear bands of yellowish down: wing-caes striated with impressed dots.

A new insect lately discovered by Mr. W. E. Leach, from whom it received the specific appellation of Cardui: it occurs on the thistle, but is rare.



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P L A T E D X I I I .

A T T E L A B U S M E L A N U R O S .

C O L E O P T E R A .

G E N E R I C C H A R A C T E R .

Antennæ moniliform, thicker towards the tip, and seated on the snout: head pointed behind and inclined.

S P E C I F I C C H A R A C T E R

A N D

S Y N O N Y M S .

Black: wing-cases testaceous, the tip black.

A T T E L A B U S M E L A N U R O S : niger, elytris testaceis apice nigris. *Gmel.*
Linn. Syst. Nat. 1810. 6.

O D A C A N T H A M E L A N U R A , *Paykull. Fn. Sv.* I. 169.—*Fabr. Syst.*
Eleut. 1. 228.—*Latr. Gen. Inf.* I. 194.—*Tab.*
meth. 164.

C a r a b e r e t r é c e . *Oliv. Entom.* 3. 35.



This is a species rather exceeding, in point of size, such insects as may with propriety be termed diminutive; its length, as shewn by
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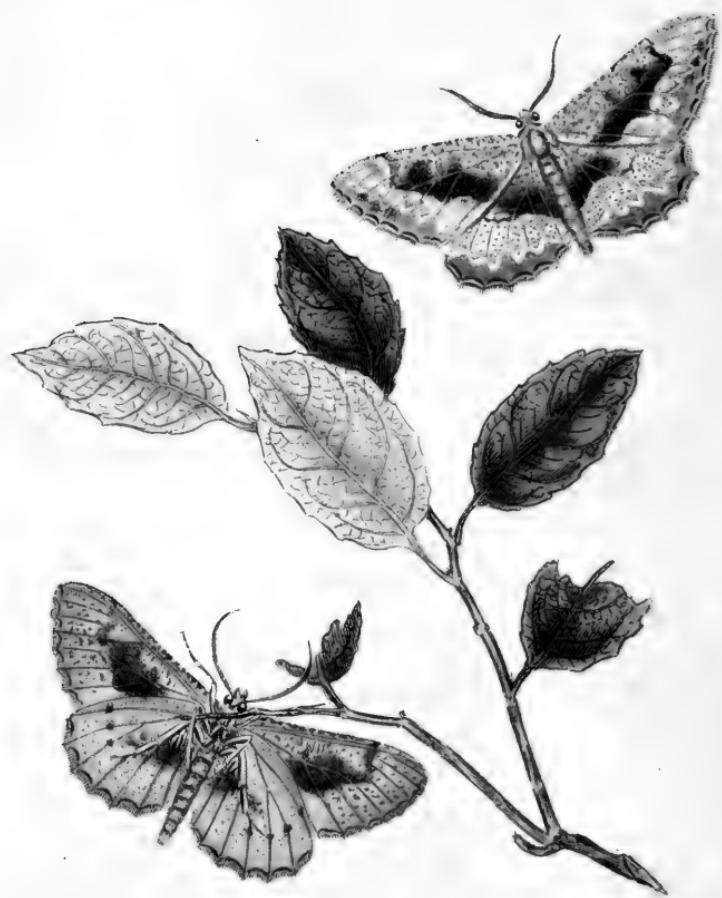
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the smallest figure, exceeding one third of an inch, and including the antennæ considerably more: its form is peculiar, and the colours which are gay, in some degree remarkable for their brilliancy. Its singularity consists in the very curious form of the thorax, a kind of elongated cylinder, connecting the head with the body, as if the former were placed on a slender pedicle; the thorax being narrower by one half than the head, and not above one third the breadth of the wing-cases. Notwithstanding this disproportion of its parts, the appearance is not devoid of elegance, and to this the beauty of its colours contribute materially.

The head and thorax of this insect are green and blue, changeable into each other, and highly glossy: the contrast between the colours of these and the wing-cases is striking, the latter being fine orange, with the exception of a large common spot of the same shining blue and green, as on the head and thorax, or rather inclining more to azure, that is, disposed at the posterior extremity. It is no less worthy of remark, that the lower surface is in like manner varied with blueish shining green, and orange, the head, thorax and posterior part of the abdomen, being of the former colour, and the intervening space of the abdomen, orange. The antennæ are orange from the base to the middle, beyond which they are dusky: the legs also are of two colours, the thigh and first joint being orange, the remainder dusky; and besides this the thighs are black at the tips.

Gmelin describes this species as a native of Upsal. In Britain it is a very local species, but does not appear uncommon in the places it inhabits: it occurs abundantly in Cromlyn bog, in Glamorganshire, near Swansea, and also in a bog near Norwich.

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P L A T E D X I V .

PHALÆNA CONVERSARIA.

LARGE BANDED CARPET MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base: tongue spiral: wings in general deflected when at rest. Fly by night.

Geometra.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings pale brown, with dark fuscous middle band, and greyish indented common band behind: posterior legs deeply ciliated.

GEOMETRA CONVERSARIA. *Hüb. Schmet.* 62. 321?

This interesting acquisition to the British Entomologist was discovered by Mr. W. E. Leach, the latter end of August, about the year 1807, in Warley-wood, at Tamerton, near Plymouth, Devonshire.

The size of this insect is considerable, the colour above pale brown, with a rich dark fuscous band across the middle, and immediately behind it, a broad and very pale common band, circumscribed above by an angulated, and beneath by an indented palish line. The whole surface is sprinkled with specks of brown. The under surface is paler, with more obsolete speckling, and some blotches of fuscous, forming an interrupted common band in the middle. The four anterior legs are naked as usual, the two posterior deeply fringed with fine hairs.

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PLATE DXV.

DERMESTES MURINUS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated, the club perfoliated, and three of the joints thicker: thorax convex and slightly margined: head inflected, and concealed under the thorax.

SPECIFIC CHARACTER

AND

SYNONYMS.

Oblong, black, clouded with whitish down: abdomen and breast white.

DERMESTES MURINUS: oblongus tomentosus nigro alboque, abdome niveo *Linn. Synt. Nat.* 2. 156. 3. 18.—
Fn. Sv. 426.

DERMESTES MURINUS. *Fabr. Ent. Synt. T. I. p. I.* 230. 14.

DERMESTES MURINUS: tomentosus fusco cinereoque nebulosus, scutello fulvo. *Marjh. Ent. Brit. T. I. p. 61.* 2.

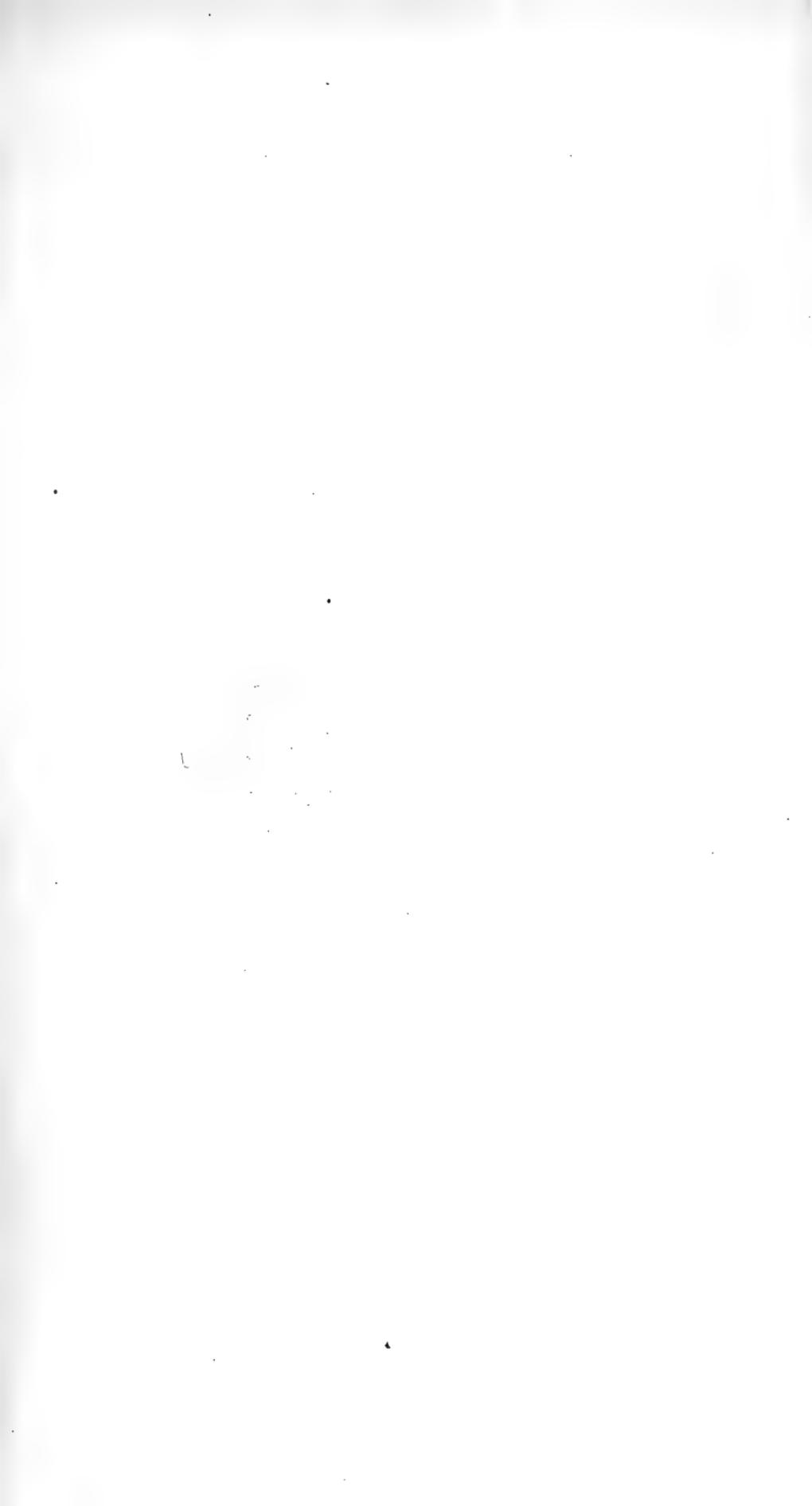
DERMESTES NEBULOSUS. *De Geer. Inf.* 4. 197. 2.



Feeds on putrid carcases.

PLATE







P L A T E D X V I .

CARABUS BIPUSTULATUS.

BIPUSTULATED CARABUS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform : feelers generally six, the last joint obtuse and truncated ; thorax flat and margined : wing-cañes margined.

SPECIFIC CHARACTER

AND

SYNONYMS.

Winged : thorax orbicular, and with the anterior part of the wing-cañes rufous, posterior part black, with a common rufous spot.

CARABUS BIPUSTULATUS : alatus, thorace orbiculato rufo, coleoptris apice nigris : macula rufa. *Fabr. Ent. Syst. T. I.* 161. *n. 164.—Paykull. Fn. Sv. I.* 138. 54.—*Marjh. Ent. Brit. T. I.* p. 454. 88.

A small, but elegant species, and which appears to peculiar advantage when magnified : the ground colour varies from rufous to paler,

paler, yellowish, and testaceous in different specimens; and some little variation is perceptible also in the form of the common spot at the posterior part of the wing cases. The antennæ are fuscous at the base, the extremity pale or yellowish, and the legs of the latter colour.

The smallest figure represents this pretty little insect in its natural size.

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PLATE DXVII.

PHALÆNA INSCRIPTATA.

LETTERED MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base : tongue spiral : wings in general deflected when at rest. Fly by night.

*** *Geometra.*

SPECIFIC CHARACTER.

PHALÆNA INSCRIPTATA. Pale, anterior wings banded and lineated : with two dusky characters, and a whitish Λ in the disk of the middle band : posterior wings with scalloped lines.

The two moths represented in this plate, are beyond dispute, varieties of the same species, that delineated in the upper part of the plate differing only in having the anterior wings and bands darker than the other : the characters on both are the same, being two small dusky letter-like marks, one of which remotely resembles the hebrew *kametz* (ר) and a little behind these is a pale or whitish greek Λ (lambda.)

(lambda.) The whole of these marks are disposed near the center of the broad pale band that passes across the middle of the anterior wings, and these constitute the principal character of the species. In the darkest coloured specimen of this insect, there is a small and pretty distinct dot in the middle of the posterior wings.

This is a very rare and apparently undescribed species of the *Geometra* tribe.

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PLATE DXVIII.

ELATER RUFICOLLIS.

RUFOUS-NECKED ELATER, or SPRINGER BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform and lodged in a groove under the head and thorax; sides of the thorax terminated in an elastic spine placed in a cavity of the abdomen, by means of which the insect, when on its back, recovers its natural position.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black and polished, anterior part of the thorax red

ELATER RUFICOLLIS: niger, thorace posterius rubro nitido. *Linn.*
Fn. Suec. 724.—*Fabr. Sp. Inf.* I. p. 270. n. 33
 —*Mant. inf.* I. p. 173. n. 37.—*Ent. Syst.* I. b.
 227. 52.

ELATER RUFICOLLIS: thorace rubro nitido antice nigro, elytris
 corporeque nigris. *Marsh. Ent. Brit. T.* I.
 376. n. 2.



A rare and very pretty species. Its habits are unknown. Linnaeus describes it as a native of Sweden.



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PLATE DXIX.

FIG. I. II.

MUSCA ULIGINOSA.

DIPTERA.

GENERIC CHARACTER.

Mouth with a soft exserted fleshy proboscis, and two equal lips: suckers furnished with bristles: feelers two, very short, or none: antennæ generally short.

* *Nemotelus*

Sucker with a single recurved bristle without sheath: feelers none: antennæ moniliform, the tip fetaceous, and inserted at the base of the proboscis.

SPECIFIC CHARACTER

AND

SYNONYMS.

Male black: abdomen whitish, with black bands at the tip.
Female dark with a dorsal line of pale spots on the abdomen.

FIG.



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PLATE DXX.

CHRYSOMELA LONGIPES.

LONG-LEGGED CHRYSOMELA.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ moniliform: feelers six; larger towards the end: thorax marginate: wing-caes immarginate: body generally oval.

SPECIFIC CHARACTER.

CHRYSOMELA LONGIPES. Oblong: black: wing-caes orange with a black spot at the base, and two near the middle: anterior legs of the male very long.

A very curious insect taken about the month of May, by W. E. Leach, Esq. near Sidmouth, in Devonshire.

Fig. I. I. exemplifies the upper and lower surface of the male insect, which is distinguished by the disproportionate length of the anterior legs: fig. II. the female in which the anterior legs are about the same length as the others. Both are represented in their natural size.



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PLATE DXXI.

ACRYDIUM SUBULATUM.

SUBULATE ACRYDIUM.

HEMIPTERA.

GENERIC CHARACTER.

Antennæ filiform, and inserted under the eyes: feelers filiform and equal: lip ovate, and cleft at the tip: head ovate and inserted: thorax carinated: scutel produced behind to the end of the abdomen, and covering the wings: wing-cases none, or only lamina: legs short: posterior pair long, and formed for leaping, the tarsi composed of three joints.

SPECIFIC CHARACTER

AND

SYNONYMS.

Dark brown: scutel longer than the abdomen.

ACRYDIUM SUBULATUM: thoracis scutello abdomine longiore
Fabr. Ent. Syst. T. 2. 26.

GRYLLUS SUBULATUS. *Linn. Syst. Nat. 2, 693. 8.—Fn. Succ.*
865.

An interesting, and very curious little species, and which is also rare in Britain. The smaller figure denotes the natural size.







PLATE DXXII.

ICHNEUMON PERSUASORIUS.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth with a straight horny membranaceous bifid jaw, the tip rounded, and ciliated: mandibles curved and sharp: lip cylindrical, membranaceous at the tip, and emarginate; feelers four unequal and filiform, and seated in the middle of the lip: antennæ setaceous, of more than thirty joints: sting exerted, inclosed in a cylindrical sheath, composed of two valves, and not pungent.

SPECIFIC CHARACTER

AND

SYNONYMS.

Scutel white: thorax spotted: all the segments of the abdomen with two white dots on each side.

ICHNEUMON PERSUASORIUS: scutello albo, thorace maculato, abdominis segmentis omnibus utrinque punctis duobus albis. *Linn. Syst. Nat. 2. 932. 16.—Fn. Sv. 1593.—Fabr. Ent. Syst. T. 2. 145. n. 49.*

This

This curious species is a native of the North of Europe, and Germany. Linnæus describes it as a Swedish insect; Panzer and Schaeffer as an inhabitant of Germany; and Walckenær as being found in the environs of Paris. In Britain it is very rare: we have only heard of three British specimens, one of which was taken by Mr. W. J. Hooker of Norwich.—Its transformations are not described by any writer.

The figures in the annexed plate represent the species in its natural size.

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P L A T E DXXIII

LIBELLULA SCOTICA.

SCOTCH LIBELLULA.

NEUROPTERA.

GENERIC CHARACTER.

Mouth armed with more than two jaws: lip trifid: antennæ very thin, filiform, and shorter than the thorax: wings expanded: tail of the male furnished with a forked process.

SPECIFIC CHARACTER.

LIBELLULA SCOTICA. Thorax with two oblique yellow bands.

Male. Wings transparent with deep black stigma: abdomen blackish.

Female. Wings transparent with deep black stigma, and yellow base: abdomen yellow, with two black lines on each segment.

We have been recently favoured with specimens of this new species of Libellula by W. E. Leach, Esq. from whom it received the trivial name of Scotica, in reference to the country in which it appears only to have been hitherto discovered. This gentleman informs us it is common in the bogs of Scotland: he first observed it near Lock-awe, in

in Argyleshire, and afterwards in the bog of Bannock-bourn, in which latter place it occurs in great abundance.

Libellula Scotica is an insect of the middle size, in general appearance resembling the species *vulgata*. The male is uniformly dusky, except the wings, which are transparent: the female is more remarkable for its gaiety, the head, thorax, and abdomen being yellowish, varied with brown, and little lines of black; and the wings transparent, with the base yellow.

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P L A T E DXXIV.

CURCULIO BITÆNIATUS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated, and seated on the snout which is horny and prominent: feelers four and filiform.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax brown, with a pale streak each side: wing-cañes cinereous sprinkled with fuscous, striated with impressed dots, and marked between the striae with numerous blackish points.

CURCULIO BITÆNIATUS: thorace fusco: linea utrinque pallida, elytris cinereis fusco-conspersis punctato-striatis.
*Marsh. Ent. Brit. T. I. p. 268. 93 *.*

* Rostrum nigricans, thorace brevius. Thorax fuscus, ex ovato rotundus, linea utrinque pallida. Elytra fusco cinerea, striata; striae punctis impressis: inter striae punctula plurima nigricantia. *Ib.*

This remarkable species of *Curculio* appears to be described only by Mr. Marham, to whose specific and general description nothing material can be added. Its habitat was not apparently known till after the publication of *Entomologia Britannica*, as that work is silent in this particular: it is now ascertained that the species is not uncommon among grass, in the winged state, and that the grass affords the larva its natural, and favorite food. The nest or reticulated open work cone which it constructs previously to becoming a pupa, and in which it remains while in that state, is extremely delicate and curious in its fabric, though not in these respects singular, for many of the *Curculiones* form similar cases in which they remain enveloped while in the state of pupa. The pupa case of *Curculio bitæniatus*, is represented in the annexed plate.

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P L A T E DXXV.

HISTER QUADRIMACULATUS.

FOUR-SPOTTED HISTER.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated, the club solid: the last joint compressed, and curved: head retractile within the body: mouth forcipated: wing-cases shorter than the body, and truncated: anterior shanks denticulated, the hind shanks spinous.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black: wing-cases sub-striated, with two red spots.

HISTER QUADRIMACULATUS : ater, elytris subfstriatis, maculis duabus rubris. *Linn. Syst. Nat. 567. 6.—Fn. Su. 443.—Paykull. Fn. Suec, 36. 2.—Marsh. T. I. p. 94. fig. 6.*

A scarce British species, found in the dung of animals : it also inhabits Germany and other parts of Europe.

Its size surpasses that of *Hister unicolor*; the colour black, with a large lunated spot of red on each of the wing-cases. Sometimes these spots are interrupted in the middle, and in such specimens the wing-cases exhibit the four distinct red spots which the specific name implies. The lower surface is entirely black, and both the upper and lower surfaces are remarkably glossy.

The appearance of this insect, when the wing-cases and wings are expanded, is very singular: this is represented in the annexed plate, together with its aspect in a quiescent state.

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P L A T E DXXVI.

CARABUS INTRICATUS.

INTRICATE-DOTTED CARABUS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform : feelers generally fix, the last joint obtuse and truncated ; thorax flat and margined : wing-cases margined.

SPECIFIC CHARACTER

AND

SYNONYMS.

Apterous, violet-black : wing-cases with raised intricate striae and dots.

CARABUS INTRICATUS. Apterus violaceo-niger, elytris intricatis elevato-striatis punctulatisque. *Linn. Fn. Suec.* 780. &c.

CARABUS CYANEUS. Apterus niger violaceo nitens, elytris punctis intricatis rugosis *Paykull. Monogr.* 10. 2 — *Fabr. Ent. Syft. T. I. p. 126. n. 9.—Buprestis nigroviolaceus. Geoffr. Inf. I. 144. 4.*

It appears Fabricius was aware the carabus he described under the specific name of cyaneus, must be in all respects the same as the Linnæan Carabus intricatus, since he inserts the reference to that species in *Fauna Suecica*, among his synonyms : Paykull called it cyaneus, and this name Fabricius was induced to retain, though certainly less applicable than that it had previously obtained from Linnæus.—Fabricius describes it as a native of woods in Europe. Panzer includes it among the insects of Germany : in England it is very rare, and indeed appears not to have been discovered in the latter country till very lately.

The figure represents this curious insect in its natural size.

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P L A T E DXXVII.

PHALÆNA ROBORARIA.

GREAT OAK BEAUTY MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base : tongue spiral : wings in general deflected when at rest. Fly by night.

Geometra.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented, grey with numerous brown streaks and specks : beneath whitish, lower wings, with a fuscous lunule in the middle.

PHALÆNA ROBORARIA : pectinicornis alis dentatis griseis : atomis strigisque numerosis fusca. *Fabr. Ent. Syst. T. 3. p. 2. 137. n. 28.—Ejp. T. 5. f. 2.*

Several

Several very beautiful, and rather distinct varieties of this fine species occur in Austria : that which we have delineated is the only variety, however, we believe found in England, where it appears to be extremely uncommon. The species we apprehend to be rare on the Continent, as well as in England, Fabricius referring expressly to the cabinet of Mr. Scieffermyller, for the example he describes.

Phalæna roboraria is nearly allied to the species of *geometra*, denominated by English collectors the "mottled beauty," (*Phalæna repandaria*) from which it is distinguished by the superiority of its size, and some little variation in the form and disposition of the fuscous lines on the wings : the dissimilarity is evident on an accurate comparison, but is not so obvious at the first view.

Fabricius describes the larva as being of a grey brown colour, with a darker dorsal line, and curves on the segments, and according also to this writer the larva feeds on the oak, whence it obtains the trivial appellation of the great oak beauty.



PLATE DXXVIII.

FIG. I. I.

CANTHARIS FASCIATA.

FASCIATED CANTHARIS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform: thorax generally margined, and shorter than the head: wing-caes flexile: sides of the abdomen edged with folded papillæ.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax greenish: wing-caes blackish, with two red bands.

CANTHARIS FASCIATA. *Linn. Syst. Nat.* 648. 10.—*Fn. Sv.* 711.
—*Gmel.* 1899. 10.

MALACHIUS FASCIATUS : elytris nigris : fasciis duabus rufis. *Fab.*
Syst. Ent. 208. 4.—*Sp. Inf.* I. 262. 5.—*Mant.*
I. 169. 8.—*Ent. Syst.* I. a. 224. 13.

Malachius fasciatus. *Oliv. Inf.* 27. 10. 12. *tab. I. fig. 2.*

CANTHARIS FASCIATA : thorace virescente, elytris nigris : fasciis
duabus rubris. *Marsh. Ent. Brit. T.* 371. 11.

TELEPHORUS FASCIATUS. *De Geer.* 4. 76. 9.

La cicidele à bandes rouges. *Geoff. I.* 177. 12.

This is a very gay and pretty insect: the antennæ and legs are black: the head blackish, glossed with shining green, as is likewise the thorax: the wing-cases are dusky purple with a broad band of red across the middle, and another behind formed by the junction of the tips of the wing-cases, the latter being of the same red colour as the band in the middle. The abdomen at the sides are red.

The smallest figure denotes the natural size. This species is found among mosses.

FIG. II.

CANTHARIS BIPUSTULATA.

BIPUSTULATED CANTHARIS.

SPECIFIC CHARACTER.

Brassy green : front yellowish : wing-cases red at the tip.

CANTHARIS BIPUSTULATA : aeneo-viridis, fronte flavicante elytris apice rubris. *Marth. Ent. Brit. T. I. p.* 369. 9.

CANTHARIS BIPUSTULATA. Aeneo-viridis, elytris apice rubris. *Linn. It. oel.* 127.—*Fn. Suec.* 709.—*Gmel. Linn. Syst. Nat.* 1898. 8.

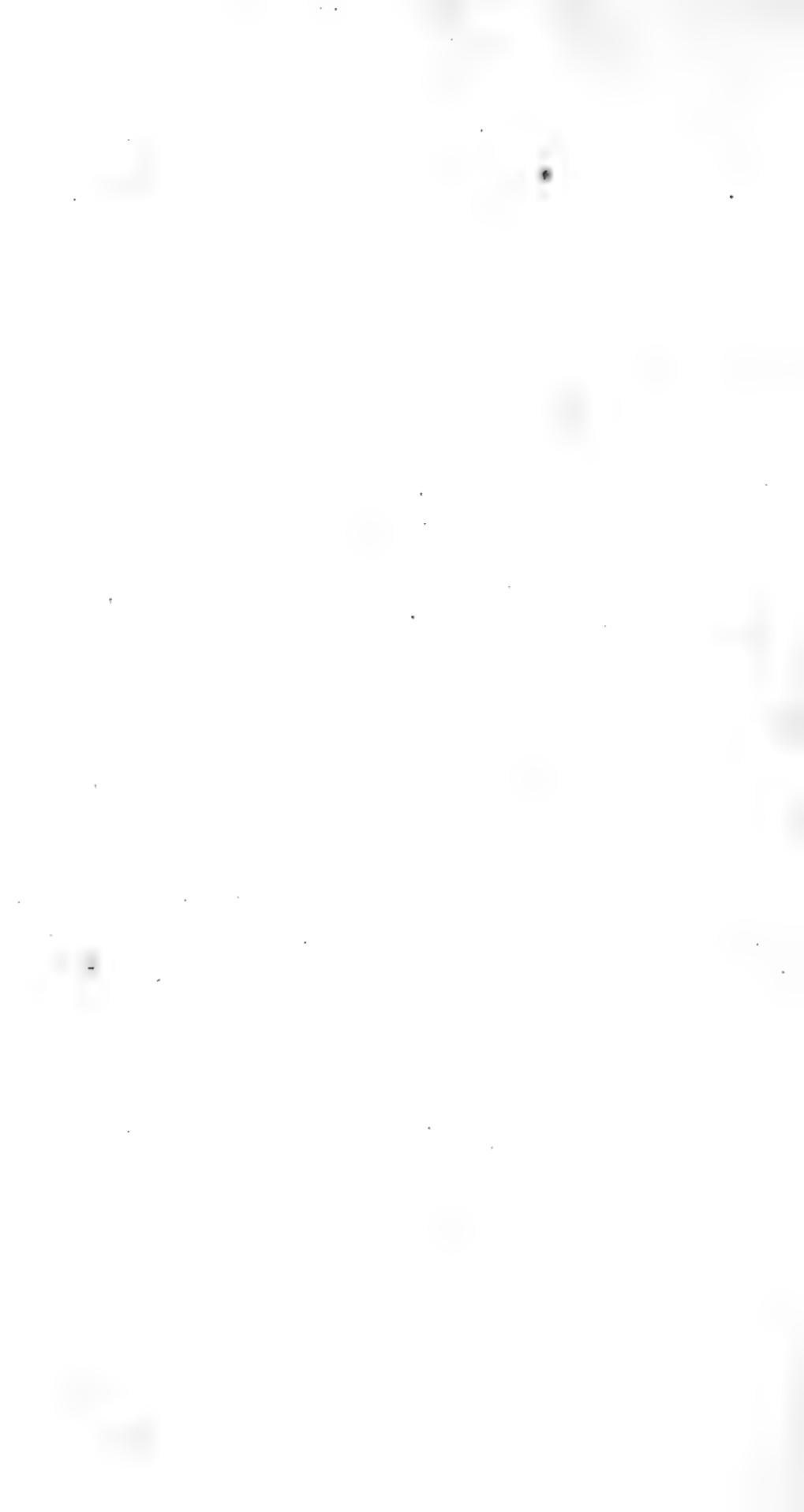
MALACHIUS BIPUSTULATUS. *Oliv. Inf.* 27. 5. 3. t. *I. f. I.*—*Fabr. Syst. Ent.* 208. 2.—*Sp. Inf.* I. 262. 2. *Mant. I.* 169. 2.—*Ent. Syst. i. a.* 222. 2.

TELEPHORUS BIPUSTULATUS. *De Geer.* 4. 75. 7.

DONACIA ASPARAGORUM. *Panz. Voel. ii. th.* 128. 6. t. 46. f. 6.
La cicindele verte à points rouges. *Geoff. Inf. I.* 175. 8.



Frequent among grafts: the larva rapacious, feeding on smaller insects, and even the grubs of its own tribe and species.







P L A T E DXXIX.

CURCULIO PINI.

PINE CURCULIO.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated and seated on the snout, which is hoary and prominent.

SPECIFIC CHARACTER

AND *

SYNONYMS.

Black, wing-cases fuscous, with dots and clouded bands of yellowish.

CURCULIO PINI: niger, elytris fuscis : fasciis nebulosis. *Linn. Syst. Nat. 608. n. 19.—Fn. Suec. 589.—Gmel. 1746. 19.—Marjh. Ent. Brit. T. I. p. 289. 152.*



A rare species in England, but common in Scotland upon the *Pinus sylvestris*. According to Linnæus, it is found in Sweden ; and Panzer includes it among the insects of Germany.

The smallest figure denotes the natural size of this curious insect.





P L A T E DXXX.

CARABUS LUNATUS.

LUNATED CARABUS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform: feelers generally six, the last joint obtuse and truncated; thorax flat and margined: wing-cafes margined.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax orbicular and rufous: wing-cafes yellow, with three black spots.

CARABUS LUNATUS. Thorace orbiculato rufo, elytris flavis: maculis tribus nigris. *Fabr. Ent. Syst. I.* 163. 172.—*Syst. Ent.* 247. 60.—*Panz. Ent. Germ.* 63. 98.—*Marsh. Ent. Brit. T. I.* p. 466. 1.

Carabus eques. *Schranck. Beytr.*



This very elegant little species is described by Fabricius as an inhabitant of Britain, on the authority of a specimen in the collection

of

of Mr. Lee: the species occurs likewise in Germany, and Italy. Whether it is common in these latter mentioned countries is uncertain, we suspect not: in Britain it is rare.

The appearance of this insect when magnified is interesting; the natural size is denoted by the smallest figure.

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PLATE DXXXI.

SPHEX SPIRIFEX.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth with an entire jaw : mandibles horny, incurved, and denticulated : lip horny and membranaceous at the tip : feelers four : antennæ with ten articulations : wings in each sex incumbent and flat : sting pungent and concealed within the abdomen.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black : thorax hairy, immaculate : petiole of one joint, yellow, and as long as the abdomen.

SPHEX SPIRIFEX : atra thorace hirto immaculato, petiolo uniarticulato flavo longitudine abdominis. *Fabr. Ent. Syft. T. 2. 204. 24.—Schäff. Icon. tab. 38. fig. I.*



We possess an example of this curious insect in the British cabinet of the late Mr. Drury. The specimen does not exactly seem to accord with the Linnæan *Sphex Spirifex*, but rather with the ac-

knowledged variety of that species described by Linnæus under the name of *Ægyptia*; and is clearly the variety found by Schæffer in the environs of Ratisbon (*Ichneumon decimus septimus*) to which Fabricius refers for his species *spirifex*.

This insect is chiefly an inhabitant of the south of Europe, where it lives in societies: the nests are constructed in the sides of the mud-walls of cottages and other convenient situations; their form cylindrical, and the interior in some degree resembling a honey-comb. It preys on insects of every kind, and is in particular a great enemy to the spider, which it easily overcomes, and seems to prefer to most other food.—The size of this species is considerable.

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P L A T E DXXXII.

F I G. I. I.

STAPHYLINUS LUNULATUS.

LUNULATED ROVE-BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ moniliform: feelers four: wing-cases half as long as the body: wings folded up under the wing-cases: tail armed with a forceps, and furnished with two exsertile vesicles.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax and abdomen orange: wing-cases black with two orange sublunate spots at the base: extremity of the abdomen black, with a pale band.

STAPHYLINUS LUNULATUS: rufus, capite abdominis elytrorumque posticis nigris, femoribus totis rufis. *Linn. Fn. Sv. 845.—Gmel. 2037. 7.—Paykull. Monogr. 41.*

OXYPORUS LUNULATUS : *flavus elytris nigris basi apiceque pallidis.*

Fabr. Syst. Ent. 268. 2.—Sp. Inf. i. 338. 2.—

Mant. i. 219. ♀.—Ent. Syst. I. b. 532. 3.

STAPHYLINUS LUNULATUS. *Marsh. Ent. Brit. T. I. 523. 72.*



A minute and very beautiful species, found in the dung of cattle.—The natural size of this, and the other two interesting little species represented in the annexed plate, is denoted by the smaller figures. Staphylinus lunulatus is a native of the northern parts of Europe, being found in Sweden and Denmark, as well as Britain, and extends likewise as far southward as Germany and France.

FIG. II. II.

STAPHYLINUS MARGINATUS.

MARGINATED ROVE-BEETLE.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black: sides of the thorax, two dots on the anterior part of the wing-cases, with the posterior margin, and the legs rufous.

STAPHYLINUS

STAPHYLINUS MARGINATUS: ater thoracis lateribus pedibusque flavis. *Fabr. Syst. Ent.* 266. 8.—*Sp. Inf. i.* 336. 9.—*Mant. i. 22.* 15.—*Ent. Syst. i. b.* 526. 30.
Paykull. Monogr. 32.—*Fn. Suec. iii.* 392. 32.
Gmel. Syst. Nat. 2028. 36.

OXYPORUS MARGINELLUS. *Panz. Ent. Germ.* 355. 21.

STAPHYLINUS MARGINATUS: ater, thoracis lateribus pedibusque rufis. *Marsh. Ent. Brit.* 512. 40.

Fabricius describes this species as a native of England and Norway.

FIG. III. III.

STAPHYLINUS BIPUSTULATUS.

BIPUSTULATED ROVE-BEETLE.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black : wing-cases with two ferruginous dots.

STAPHYLINUS BIPUSTULATUS: niger, elytris puncto ferrugineo.
Marsh. Ent. Brit. T. I. 527.

STAPHYLINUS

STAPHYLINUS BIPUSTULATUS. *Fabr. Syst. Ent.* 266. 11.—*Sp. Inf. i.* 336. 12.—*Mant. i.* 221. 18.—*Ent. Syst. i. b.* 526. 34.

OXYPORUS BIPUSTULATUS. *Panz. Faun. Germ.* 27. t. 10.

Inhabits various parts of Europe.

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P L A T E DXXXIII.

CURCULIO MARITIMUS.

MARITIME CURCULIO.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated, and seated on the snout which is horny and prominent: feelers four and filiform.

SPECIFIC CHARACTER.

CURCULIO MARITIMUS. Body somewhat ovate, black, rather glossy and minutely punctured, with obsolete striae on the wing-cases.

An interesting insect very nearly allied to *Curculio niger* of Entomologia Britannica, but is still sufficiently distinct, and should most probably be considered as a new species. It was found by W. E. Leach, Esq. on *Arenaria maritima* and *peploides*, and might hence have borne the significant appellative of *arenarius*, had not that name been previously given by Herbst to a very different insect discovered in Prussia, and which is also retained by Gmelin under the same name in *Systema Naturæ*.

A material

A material difference is perceptible in the two insects at present under consideration, notwithstanding which, they are, however, presumed to constitute the two sexes of the same species. One is smaller and more ovate than the other, the striæ of punctures on the wing-cases less obviously defined, and the thighs blackish, while in the other the thighs incline to ferruginous red. The smaller delineations at fig. I. and II. exemplify the natural size a little enlarged, the other representations exhibit the same insects considerably magnified.





P L A T E DXXXIV.

LYTTA VESICATORIA.

BLISTER-BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform: head gibbous, inflected, and broader than the thorax: thorax in general cylindrical: wing-cases soft, flexible, and linear: body elongated.

SPECIFIC CHARACTER

AND

SYNONYMS.

Bright glossy golden green: antennæ black.

LYTTA VESICATORIA: viridissima nitens, antennis nigris. *Marsh.*
Ent. Brit. T. I. 484. *n. I.*—*Fabr. Sp. Inf. I. p.*
328. *n. I.*—*Mant. Inf. I. p.* 215. *n. I.*—*Sylt.*
Ent. 260. I.—*Ent. Sylt. I. b.* 83. *I.*

MELOE VESICATORIUS. *Linn. Syl. Nat.* 679. *3. Fn. Suec.* 827.
Cantharis vesicatoria De Geer. 5. 12. *t. I. f. 9.*
La cantharide des boutiques. *Geoff. I.* 341. *1. t. 6, f. 5.*

The *Lytta vesicatoria* is a very uncommon insect in this country though abundant in many other parts of Europe, the southern especially; and is in particular found in such plenty in Spain as to have obtained from that circumstance the popular appellation of Spanish *Cantharis*, or blister-fly.

Mr. Marsham describes it as a British species, and we possess a specimen in the cabinet of the late Mr. Drury, which is admitted to have been taken alive in this country. We have besides another specimen which differs only from the former in being entirely of a blue instead of green colour, and this we are induced to represent likewise from the persuasion of its being a British insect. In a natural state the *Lytta vesicatoria* is found on the privet and the elder, and also on the ash; its uses in the pharmacy are sufficiently understood, and these alone, independently of its beauty, must doubtless entitle this elegant little insect to our immediate consideration.

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P L A T E DXXXV.

F I G. I.

ELATER CYANEUS.

CYANEOUS SKIPPER-BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform, lodged in a groove beneath the head and thorax : under-side of the thorax terminating in an elastic spine, lodged in a cavity of the abdomen, by which means when placed on the back it springs up, and recovers its natural position.

SPECIFIC CHARACTER

AND

SYNONYMS.

Entirely purplish blue and dotted : wing-cases striated.

ELATER CYANEUS : totus purpureo-caeruleus punctulatus, elytris striatis. *Marsh. Ent. Brit. T. I.* 388. 32.



A rare insect, and which appears hitherto to have been described only as a British species. Some collectors have conceived it to be a sexual difference of the following kind.

X 2

F I G.

FIG. II.

ELATER IMPRESSUS.

IMPRINTED SKIPPER-BEETLE.

SPECIFIC CHARACTER

AND

SYNONYMS.

Blue-black, and glossy: wing-cases with an impressed dorsal line, and two dots: legs pitchy.

ELATER IMPRESSUS: atro-cæruleus niditus, thorace linea dorsali punctisque duobus impressis, pedibus piceis.
Marsh. Ent. Brit. T. I. 387. 29.

Rather larger than the preceding.

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P L A T E DXXXVI.

BOMBYLIUS MINOR.

SMALL HUMBLE BEE FLY.

DIPTERA.

GENERIC CHARACTER.

Mouth with a very long straight setaceous sucker, formed of two unequal horizontal valves, and containing setaceous stings.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings immaculate : body yellowish, hairy : legs testaceous.

BOMBYLIUS MINOR : alis immaculatis, corpore flavescente hirto,
pedibus testaceis. *Linn. Syst. Nat.* 1009. 4.—
Fn. Sv. 1920.—*Fabr. Ent. Syst.* T. 4. 409.
n. 9.

This is the last of the Bombylius tribe we have to describe in the present work ; three species only being found in Britain and of these two are already included.

The

The three species of British Bombylii bear the names of major, medius, and minor; and these are sufficiently expressive of the comparative size of each, major being the largest, minor less by one half; and medius of an intermediate size between the other two. The latter appears to be more rare than either: it is found in spring, hovering over flowers the nectareous juices of which, afford its favourite food. The figure represents this little species in its natural size.

〔明治二年〕



P L A T E DXXXVII.

F I G. I.

SILPHA HUMATOR.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated, the club perfoliated: wing-caes margined: head prominent: thorax somewhat flattened and margined.

SPECIFIC CHARACTER

AND

SYNONYMS.

Oblong, entirely black, except the rufous tip of the antennæ.

SILPHA HUMATOR: oblonga tota atra, antennis apice rufis exceptis.
Marsh. Ent. Brit. T. I. 114. 2.

NICROPHORUS HUMATOR. *Olivier. Inf. 2. 10. 8. 4. tab. I. fig. 2.*
—*Fabr. Ent. Syst. T. I. p. 247. n. 2.*

DERMESTES. *Geoff. Inf. I. 99. 2.*

Rare in Britain. This insect is similar to the species *Germanica*, but differs in being smaller, and in having the whole of the clavated part

part of the antennæ except the first joint rufous. The prevailing colour is black inclining to chocolate ; the head, thorax, wing-cases, extremity of the abdomen and legs, and also the whole of the under surface being of this colour. That part of the abdomen above which is covered by the wings and wing-cases when the insect is at rest is testaceous, and the tip of the abdomen, or tail, the same but rather darker.

FIG. II.

SILPHA MORTUORUM.

SPECIFIC CHARACTER

AND

SYNONYMS.

Oblong, black ; wing-cases with a band and spot of ferruginous : club of the antennæ black.

SILPHA MORTUORUM : oblonga atra, elytris fascia maculaque ferrugineis. *Marsh. Ent. Brit. T. I.* 115. 4.

NICROPHORUS MORTUORUM. *Fabr. Ent. Syst. I. a.* 248. 5.

NICROPHORUS VESPILLOIDES. *Fuesl. Archiv. 89. I.*

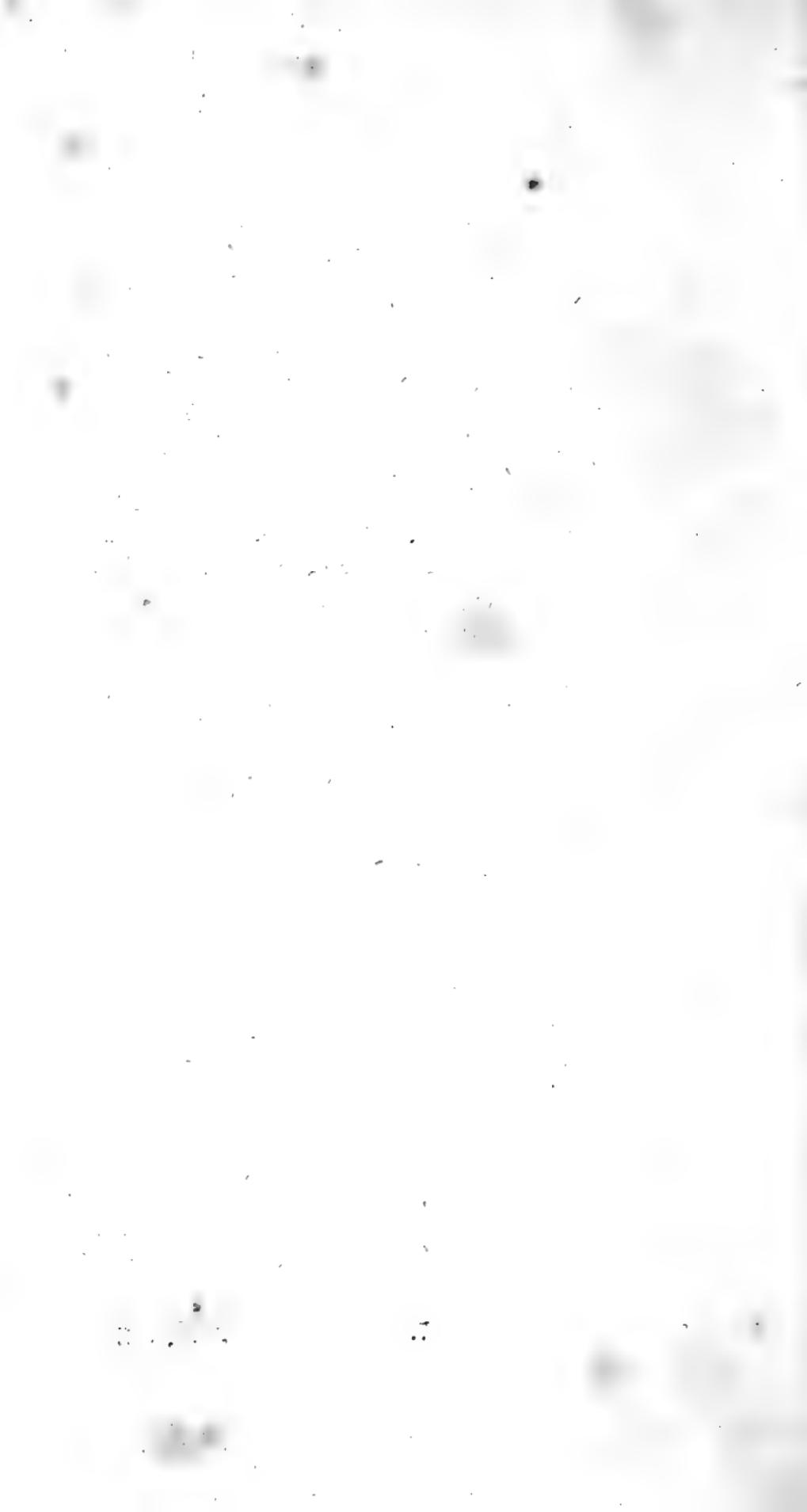
Pollinctor vulgaris minor. *Voet. Coleopt. t. 30. 3.*

Similar to Silpha vespillo, from which it differs in the following material particulars : it is smaller than vespillo : the clavated part of the antennæ is black instead of ferruginous : the rufous orange spaces

on

on the wing-cases instead of being disposed in two distinct transverse bands form a single common band across the middle, and a detached spot behind on each of the wing-cases. Sometimes the anterior band is in like manner divided by the surrounding space of black into two distinct reddish spots, one on each wing-case as in the posterior part before described, and by that means exhibits altogether four orange spots, two on each side.—It may be lastly added, that the legs are naked in the species mortuorum, while in *S. Vespillo* these are beset with fulvous down.

This insect feeds on carrion and dung, like the other species to which it is closely allied: Panzer has also found it in Fungi,



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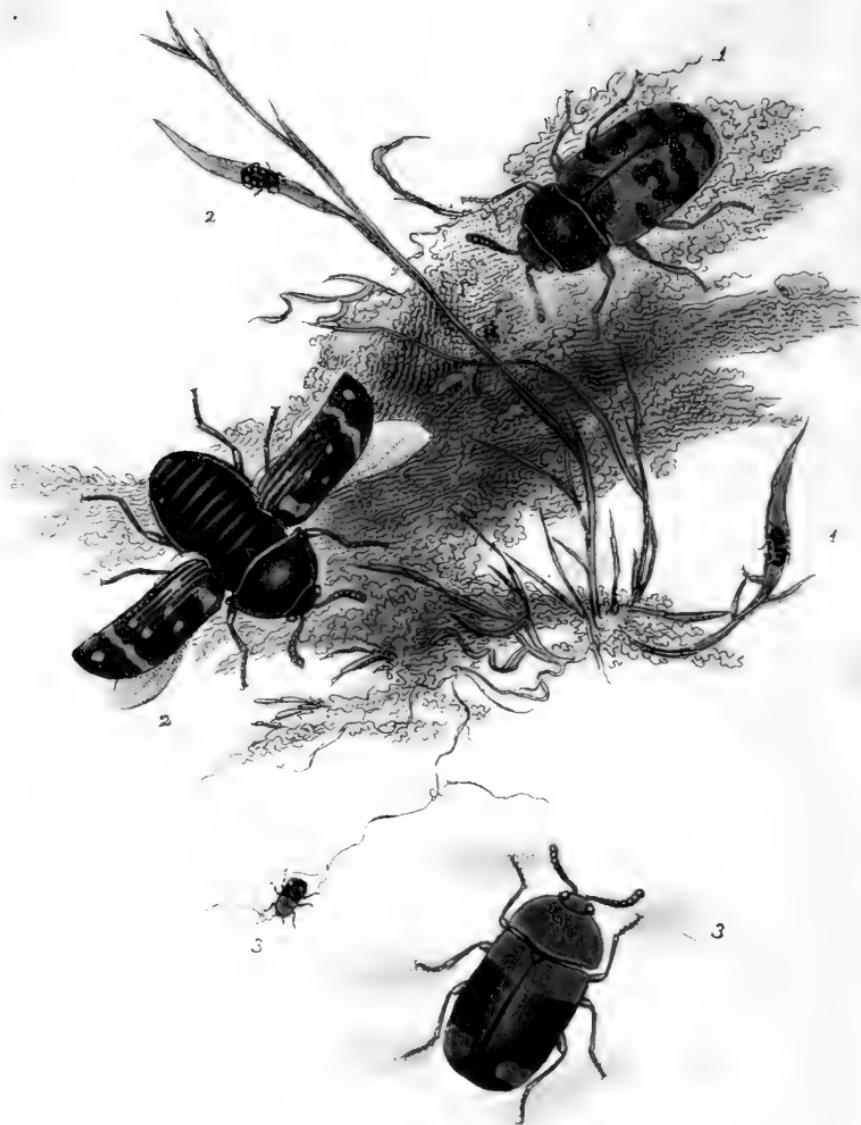


PLATE DXXXVIII.

BOLETARIA MULTIPUNCTATA.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ perfoliated, and thicker towards the end: thorax margined, with three hollows behind, the middle one obsolete: wing-cases margined: body ovate.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black: wing-cases finely striated, variegated with black and ferruginous.

BOLETARIA MULTIPUNCTATA: nigra, elytris minutè striatis, ferrugineo nigroque variis. *Marth. Ent. Brit. T. I.*
p. 139. 3.

MYCETOPHAGUS MULTIPUNCTATUS. *Fabr. Ent. Syst. i. b. 498.*
5. Panz. Ent. Germ. 337. 4.

DERMESTES MULTIPUNCTATUS. *Thunb. Inf. Suec. 79. 6.*



Found on fungi, of the Boletus genus. Length two lines.

FIG. II. II.

BOLETARIA ATOMARIA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black, with dots and band behind fulvous.

BOLETARIA ATOMARIA: nigra, clytris punctis fasciaque postica fulvis. *Marsh. Ent. Brit. T. I. p. 141. n. 7.*

IPS ATOMARIA. *Fabr. Mant. I. 46. 9.*

Mycetophagus atomarius. *Fabr. Ent. Syll. i. b. 498. 4.*



This is about the size of the former: the general colour black glossed with blue: the head and thorax immaculate: wing-cases varied with dots, and an irregular waved posterior line: antennæ and legs dusky.

It is found like the last, and succeeding species on fungi of the *Boletus* kind.

FIG.

FIG. III. III.

BOLETARIA PUNCTATUS.

SPECIFIC CHARACTER

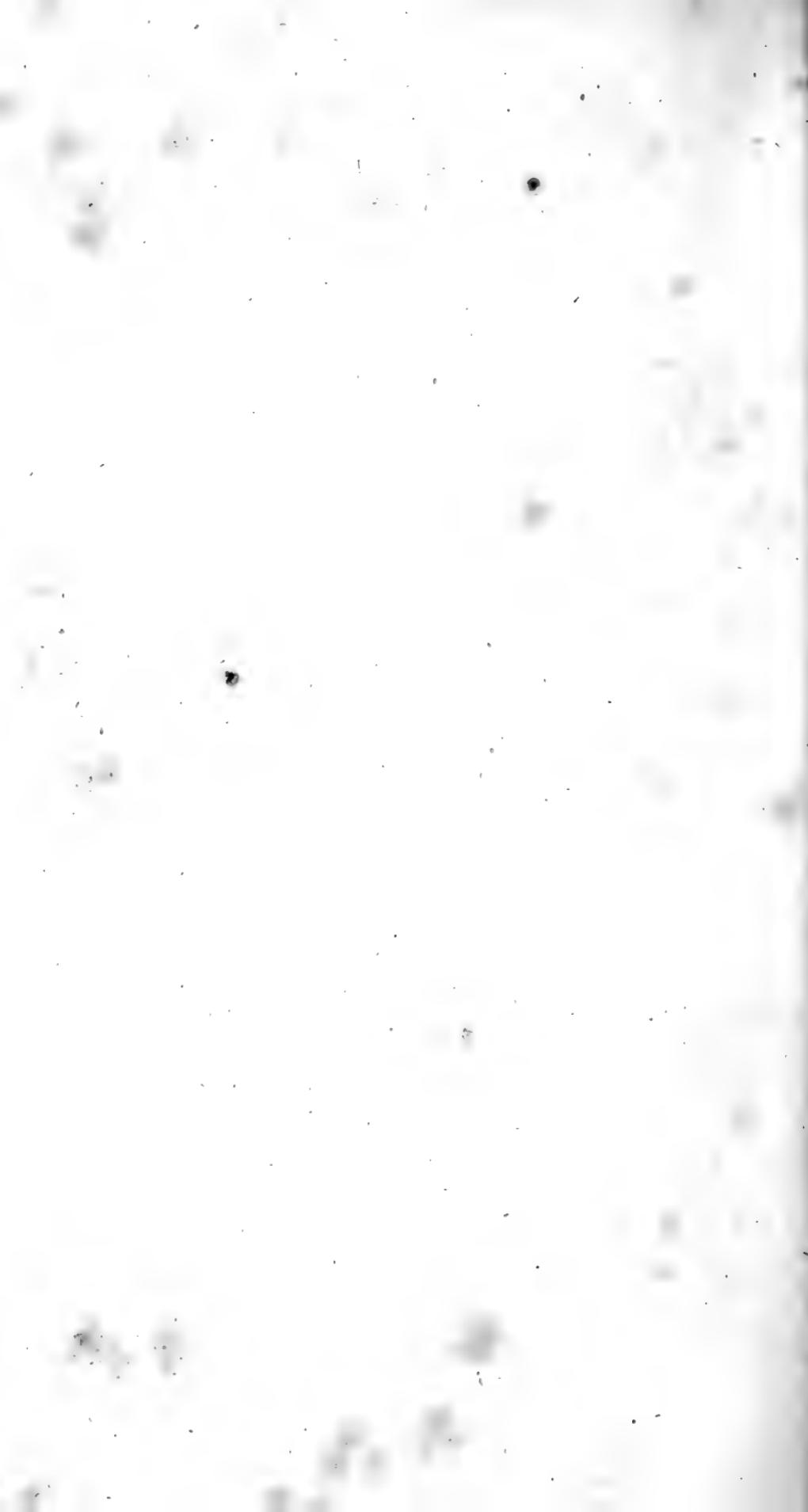
AND

SYNONYMS.

Pitchy : wing-cases somewhat punctated and black, band at the base and two spots at the end of the wing-cases ferruginous.

MYCETOPHAGUS PUNCTATUS : piceus elytris subpunctatis nigris basi ferrugineis. *Fabr. Ent. Syst. T. I. b. 499.*
n. 10. Panz. Ent. Germ.

Rare, and rather larger than the two preceding.



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PLATE DXXXIX.

FIG. I. II.

SILPHA SINUATA.

SINUATE SILPHA.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated, the club perfoliated: wing-cases margined: head prominent: thorax somewhat flattened and margined.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax emarginate and very rough: wing-cases with three raised lines, and the tip sinuate.

SILPHA SINUATA: thorace emarginate rugosissimo: elytris lineis elevatis tribus apice sinuatis. *Marsh. Ent. Brit. T. I.* 120. 14.

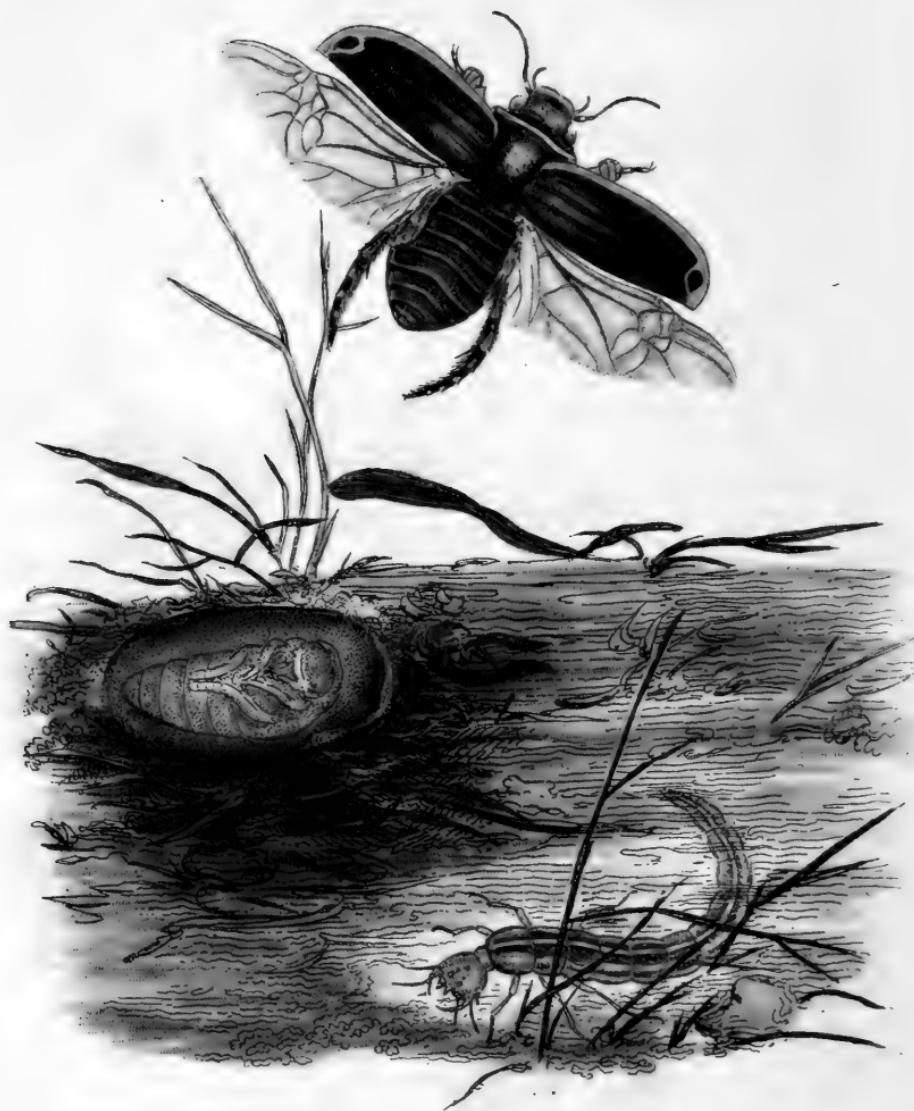
SILPHA SINUATA. *Fabr. Syst. Ent.* 75. 13.—*Sp. Inf. I.* 88. 16.—*Ent. Syst. I. a.* 252. 18.—*Gmel.* 1622. 56.

Le Bouclier noir a corcelet raboteux. *Geoff. I.* 119. 2.

This

This is a species of moderate size, allied in habit to *Silpha obscura*. The prevailing colour is blackish, inclining to grey, dull and without gloss: the thorax is brownish and rugose, with a silvery hue and somewhat silvery. The two sexes are distinguished by the termination of the wing-cases, this in one being much sinuated, and forming a distinct lobe, the other nearly entire.—This last mentioned insect is the *Silpha opaca* of some writers.

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UNIVERSITY



P L A T E D X L.

DYSTISCUS PUNCTULATUS.

DOTTED BOAT-BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ setaceous: feelers six, filiform: hind-legs formed for swimming, fringed on the inner side, and nearly unarmed with claws.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black: wing-cases with three rows of dots: shield of the head, margin of the thorax, and wing-cases yellow.

DYTISCUS PUNCTULATUS. niger clypeo thoracis elytrorumque
margine albis, elytris striis tribus punctatis.
Geoffr. Inf. I. 185. I.—Le Ditiue brun à
bordure. *ib.*

DYTISCUS PUNCTULATUS. *Fabr. Ent. Syst. I. a. 188. 4.*

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DYTISCUS

DYTISCUS LATERALI-MARGINATUS. *Degeer. T. 4. p. 396.*

n. 3.

DYTISCUS VIRENS. *Müll. zool dan. prodr. p. 70. n. 664.*

DYTISCUS PUNCTATUS. *Oliv. S. 40. 22. 4. t. I. f. 6. b. and f.*
I. e.

DYTISCUS PUNCTULATUS. *Marsh. Ent. Brit. T. I. p. 412.*

n. 2.

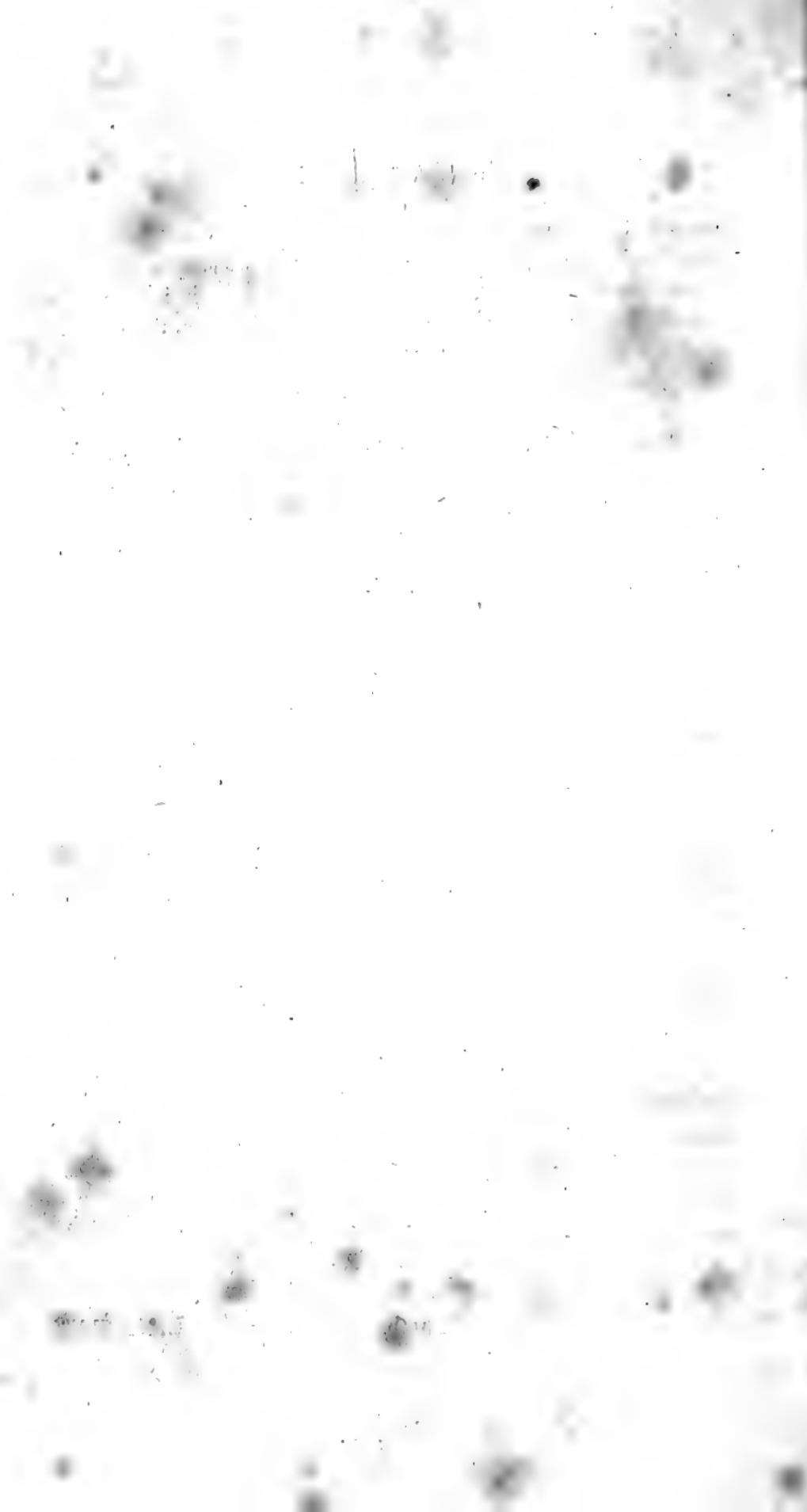
This in common with the other species of the *Dytiscus* genus is found in marshes, ponds, and other waters, particularly those of the stagnant kind, and which abound most with the refuse of animal substances, and aquatic plants.

The larva, like the rest of its tribe, is active, fierce, and vigorous; entirely aquatic and subsists on the other small inhabitants of the regions in which it lives, such as the larva of the *Ephemeræ*, the *Phryganæ* and many other creatures of the insect race that spend the earlier stage of their existence in the watery element; and also on the vermes which in such situations occur invariably, and in considerable numbers. In their turn the larvæ of the *Dytisci* become the food of fishes, and aquatic birds, but rarely fall a prey to the insect race, as their natural strength, and the powerful armament of their jaws, at least in the larger species, enables them to maintain a decided superiority over these puny enemies.

Previous to its passing into the pupa state, the larva of this species emerges from the bottom of the water, and forms a convenient receptacle for the purpose in some adjacent bank, or spot of ground near the water's edge; this accomplished, it changes to the pupa, and after a while appears in the winged state.—Having assumed this form

form it becomes in all respects an amphibious creature, residing alternately in the water, or on the land. When in the water, however, which appears to be its most congenial element, it is frequently observed to rise upon the surface to take in air, and on the contrary when on land, or in flight, it does not willingly remain a long time before it again plunges into the aquatic element.

Dytiscus punctulatus is found in the ditches of Battersea meadows.



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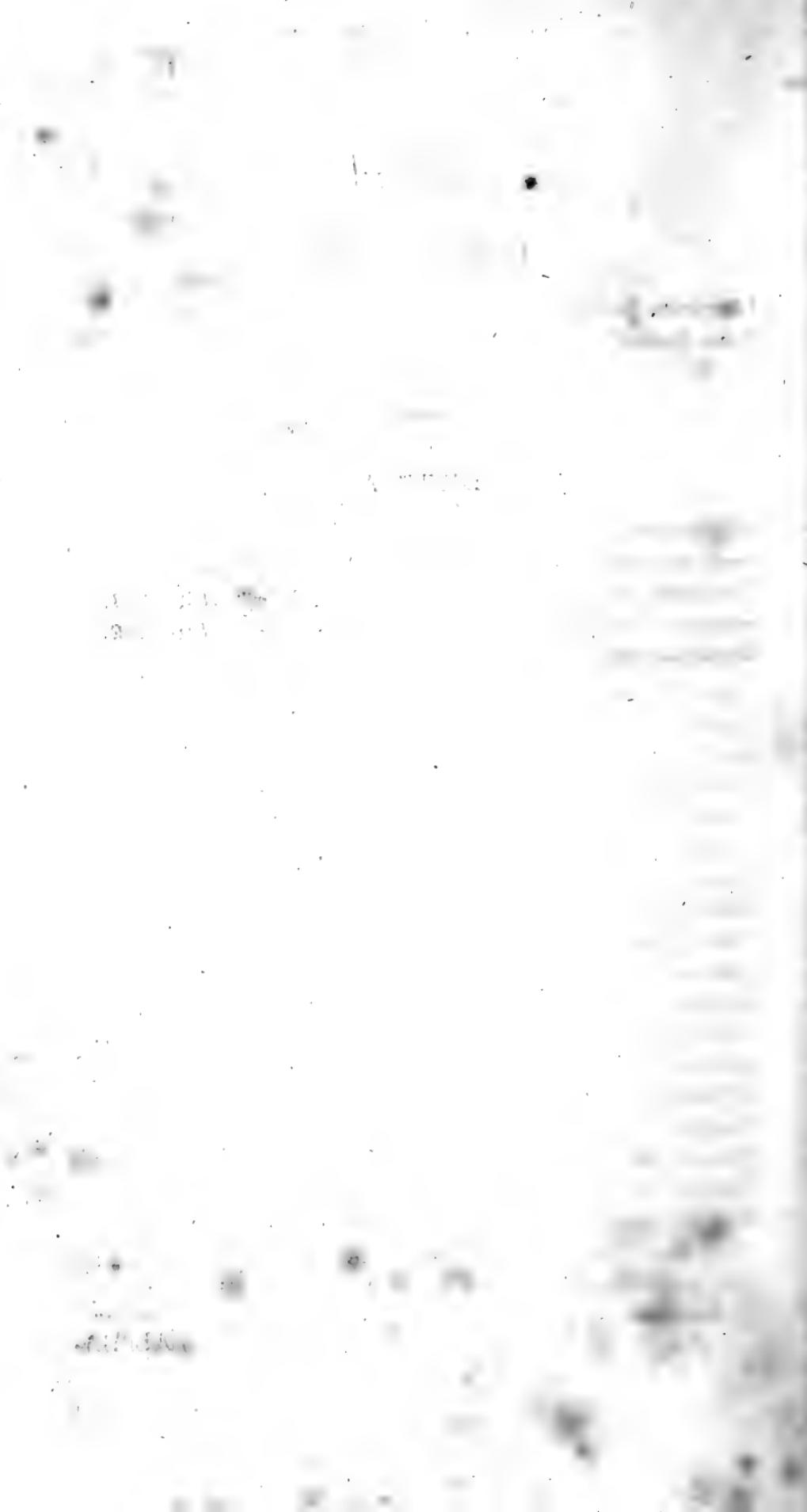
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